



NOAA's National Weather Service

Building a Weather-Ready Nation

Emergency Response Capabilities

The mission of NOAA's National Weather Service is to provide weather, hydrologic and climate forecasts and warnings for the United States, its territories, adjacent waters and ocean areas, for the protection of life and property and the enhancement of the national economy.

NWS accomplishes this mission through a variety of operational offices and specialized centers, many of which provide 24/7 support to emergency responders via a variety of products and services, with other NWS offices extending hours of operation to around-the-clock coverage during emergencies.

Forecast, Warning and Decision Support Services

NWS offices collectively provide numerous critical forecast, warning and decision support services to emergency managers and responders, including:

- Local warning and forecast products to be used by the emergency management community for operational planning prior to a weather event
- Critical weather information and forecasts during and after any type of emergency, such as an oil spill response or aerial chemical release
- Spot forecasts that are custom-tailored to local information for an event
- HYSPLIT model runs for forecasts of trajectories and dispersions of airborne pollutant release into the atmosphere from chemical spills or smoke from a fire
- Upon request, WFOs can provide specially trained meteorologists, known as Emergency Response Specialists (ERS) or Incident Meteorologists (IMETs), to provide on-site meteorological support for an incident.

Specific Types of Emergency Response Provided by NWS

Hydrology: NWS has the primary responsibility among federal agencies to provide advanced alerts of hydrologic conditions via flood watches and warnings, and river forecasts in the United States.

Tsunami: NWS Tsunami Warning Centers provide direct warning capability that enables the stand-up and deployment of state and local response resources.

Aviation: NWS supports aviation emergency response via information gathering and reporting. Upon notification of an aircraft incident, the appropriate WFO and/or Center Weather Service Unit (CWSU) takes a special observation and saves applicable data for subsequent forensic analysis. NWS also operates or co-operates two Volcanic Ash Advisory Centers, which provide worldwide warnings and advisories to aviation interests regarding volcanic ash hazards.

Fire Weather: The NWS Fire Program supports decisions to protect the lives of firefighters, defend the general public, determine tactics to manage or contain wildfires and plan for future incidents.

Severe Weather: NWS support for severe weather events (tornadoes, thunderstorms, damaging winds and hail) begins with outlooks and watches well in advance of the anticipated event, followed by day-of storm warnings and advisories. These forecasts help our emergency management partners pre-position personnel to an area where assistance may be required.

Tropical: The NWS National Hurricane Center issues watches, warnings, forecasts and analyses of hazardous tropical weather in the Atlantic and eastern Pacific basins, while the NWS Central Pacific Hurricane Center issues tropical cyclone warnings, watches, advisories, discussions and statements for all tropical cyclones in the Central Pacific from 140 Degrees West Longitude to the International Dateline. NWS WFOs issue local products and statements detailing the expected local impacts of tropical cyclones whenever they threaten the U.S.

Marine: The NWS Ocean Prediction Center issues marine warnings, forecasts, and guidance for all deep sea maritime users. These products fulfill U.S. responsibilities with the World Meteorological Organization and Safety of Life at Sea Convention. NWS coastal WFOs (including along the Great Lakes), issue coastal marine watches, warnings and routine forecasts. These offices also provide decision support services for marine incidents/accidents, such as oil or chemical spills, volcanic eruptions, ecological hazards, vessels in distress, and search-and-rescue operations.

Space Weather: The NWS Space Weather Prediction Center (SWPC) is the nation's official source for civilian space weather watches, warnings, and alerts. Space weather can have significant impacts on the technologies and critical infrastructure that our economy and everyday lives depend on. Through a host of space-based and ground-based observations, modeling, and 24/7 forecaster support, SWPC predicts changes in the space environment that impacts our planet.

Dissemination Services Supporting Emergency Response

At the request of other government agencies, NWS allows the use of its dissemination systems for potential life-saving non-weather emergency messages. These messages are disseminated on behalf of other government agencies to quickly reach the public and other agencies for public safety and/or protection of property. Example messages include child abductions, shelter-in-place orders, or other civil emergency messages.